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Diagnoses of Clinical Obesity, US Armed Forces, 1998-2000

It is estimated that approximately 40 million adult Americans are 20% or more above their desirable weights ("obese"). In addition, the prevalence of obesity is increasing in all major race and gender subgroups of Americans, including those between ages 25 and 44. The pattern of increasing overweight among young adult Americans is reflected among members of the U.S. Armed Forces. The rise in overweight among military members does not seem related to decreased physical activity.[1]

Each servicemember is required to develop "habits of self-discipline required to gain and maintain a healthy body" and to present "a military image that is neat and trim in appearance."[2] In turn, each military service conducts annual assessments of its members. If members are over their maximum allowable weights for their heights, they are evaluated (by circumferential tape measurements) to estimate their percentages of body fat. Service members who are considered "overfat" are referred for medical evaluations to determine if there are underlying causes of obesity. This report describes demographic and military characteristics of servicemembers who were diagnosed with "obesity" in military outpatient clinics from 1998 to 2000.

Methods. The Defense Medical Surveillance System (DMSS) was searched to identify all outpatient visits of active duty servicemembers from January 1998 through December 2000 with primary diagnoses of obesity (ICD-9-CM code 278.0). For analysis purposes, cases were defined as active duty servicemembers who had at least one diagnosis of "obesity" during the study period. Cumulative incidence rates were calculated as cases of obesity (overall and in subgroups of interest) divided by the relevant number of individuals who served on active duty at any time during the study period.

Results. During the 3-year study period, 57,114 individuals on active military service were diagnosed with "obesity." Overall, 5.4% (n=16,408) of women and 2.4% (n=41,126) of men received clinical diagnoses of obesity (figure 1).

Women were more than twice as likely as men to be diagnosed with obesity in every demographic subgroup and in every occupational category except "combat." Among women, the cumulative incidence of obesity increased with age and was higher among black women compared to others. In contrast, among men, the oldest (more than 35 years) were the least likely to be diagnosed with obesity, and there were no significant differences in relation to race (figure 2).

Among both men and women, obesity diagnoses were relatively most common among servicemembers who were married, those with high school (or less) education, and those with medical occupations. Obesity diagnoses were relatively least common among Marines, sailors, and those with combat occupations (figure 3).

Editorial comment. Obesity of servicemembers has importance beyond that related to appearance. For example, higher percentages of body fat have been negatively correlated with performances on tests of fundamental infantry skills: running, crawling, scaling, pulling, lifting, carrying and pushing.[3,4] Thus, obesity may degrade not only the appearance but also the health, fitness, and military operational capabilities of servicemembers.

All members of the US Armed Forces are required to exercise regularly and to pass semiannual physical fitness tests. However, combat-related occupations tend to be more physically demanding and less sedentary than support or medical occupations. Servicemembers who enjoy rigorous physical activities and/or have histories of success in physically active endeavors may self-select into combat occupations. Thus, it is not surprising that those in combat occupations are relatively unlikely to be diagnosed with obesity.

Among both men and women, Marines were the least likely to be diagnosed with obesity (even though the Marine Corps has the most rigorous body fat requirements of the Services). The candidates for military service who are most physically fit may be most attracted to the physically tough, combat-oriented image of the Marine Corps.

Figure 1. Diagnoses (%) of clinical obesity, US Armed Forces, 1998-2000.

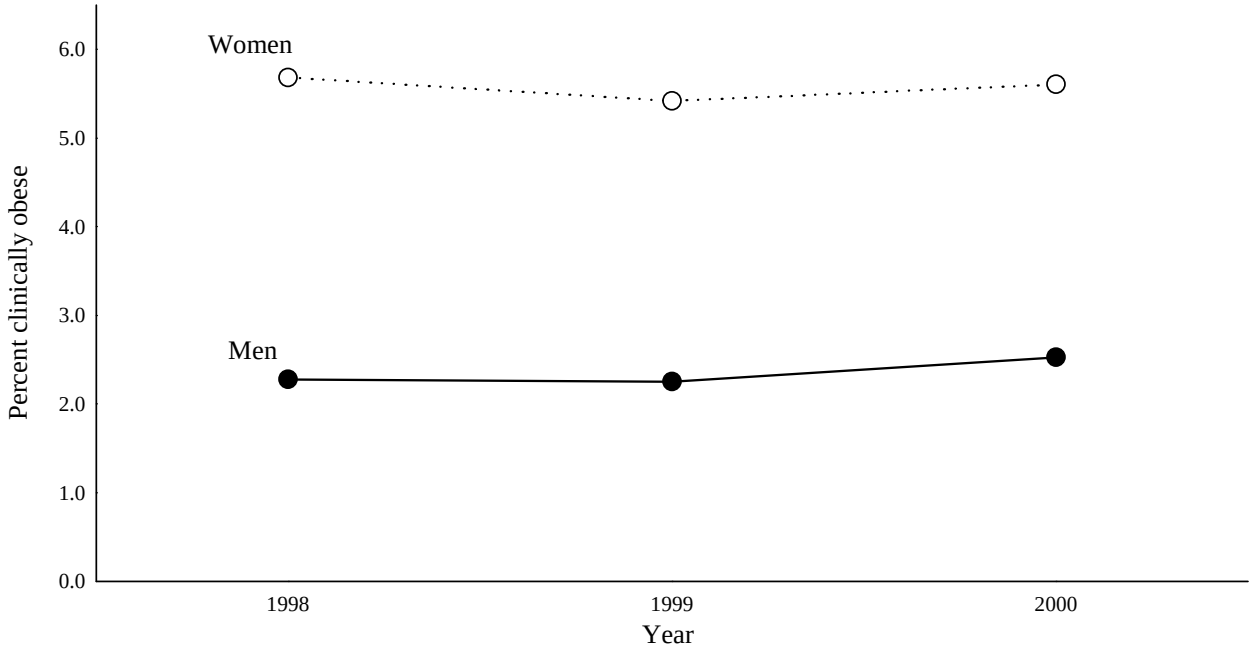
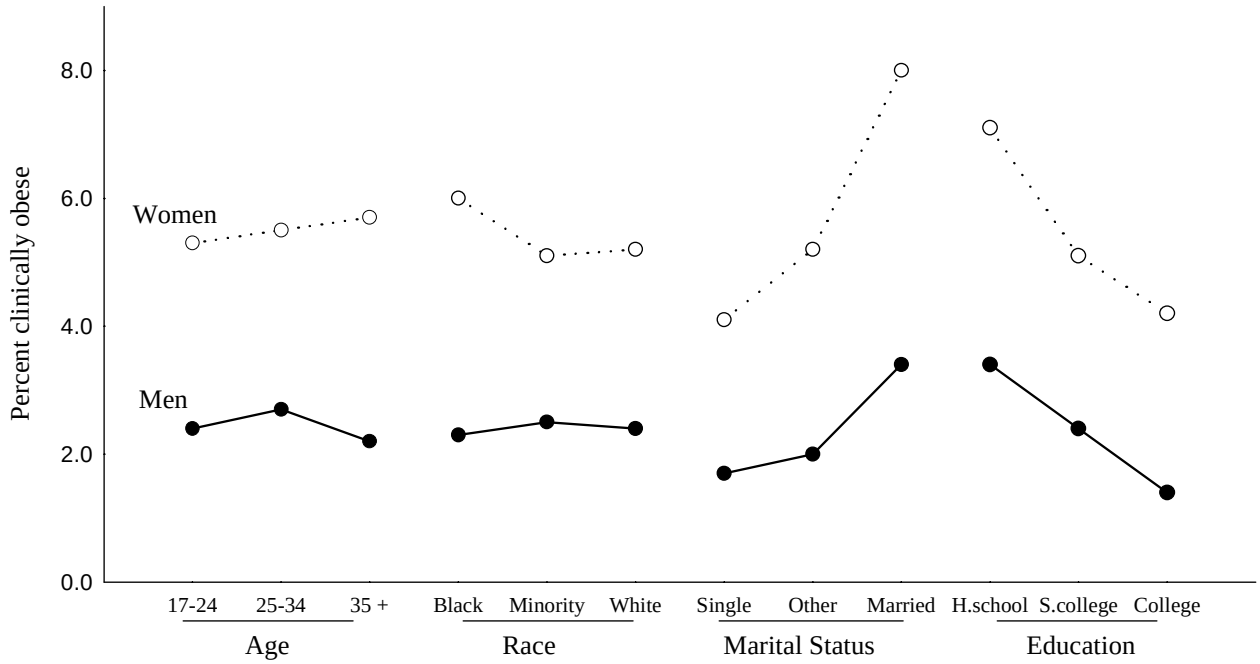


Figure 2. Diagnoses (%) of clinical obesity, by demographic characteristics, US Armed Forces, 1998-2000.



The results of this analysis must be interpreted cautiously. For example, there may be significant variability (across care providers, clinics, settings, and Services) in criteria that are used to diagnosis "clinical obesity." In turn, many servicemembers who exceed administrative height-weight standards may not be medically evaluated and/or may not be diagnosed as clinically obese and/or may not have diagnoses of clinical obesity annotated in automated ambulatory data records. On the other hand, diagnoses of clinical obesity may be inappropriately applied to servicemembers who, for example, seek nutrition or physical fitness counseling.

Report submitted by Robert A. Frommelt, MS, Analysis Group, Army Medical Surveillance Activity.

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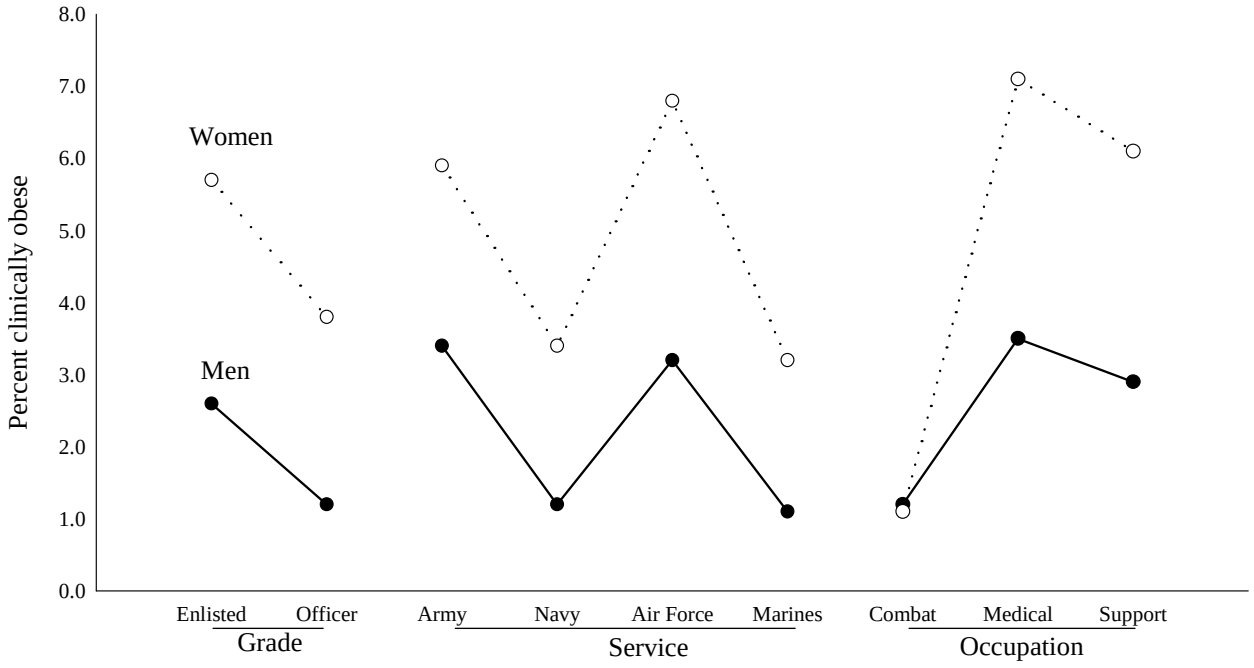
2. Bradham DD, South BR, Saunders HJ, Heuser MD, Pane KW, Dennis KE. Obesity-related hospitalization costs to the U.S. Navy, 1993 to 1998. Mil Med 2001;166(1):1-10.
3. Bishop PA, Fielitz LR, Crowder TA, Anderson CL, Smith JH, Derrick KR. Physiological determinants of performance on an indoor military obstacle course test. Mil Med 1999;164(12):891-896.
4. Jette M, Kimick A, Sidney K. Evaluation of an indoor standardized obstacle course for Canadian infantry personnel. Can J Sport Sci 1990;15(1):59-64.

Figure 3. Diagnoses (%) of clinical obesity, by military characteristics, US Armed Forces, 1998-2000.



Completeness and Timeliness of Reporting of Hospitalized Notifiable Cases, US Army, 2000

In 1994, the US Army began automated reporting of notifiable conditions. In June 1998, medical activity commanders were informed by the Office of the Army Surgeon General of the requirement to report all occurrences of medical events specified in the tri-service consensus list (Tri-service Reportable Events: Guidelines and Case Definitions, Version 1.0 July 1998)[1]. Later that year, the Assistant Secretary of Defense for Health Affairs directed that all Service medical departments use the consensus list for medical events reporting and that all case reports be integrated into the Defense Medical Surveillance System (DMSS)[2]. This report is the ninth semiannual assessment of Army-wide reporting of hospitalized notifiable medical events among active duty soldiers.

Completeness of reporting hospitalizations, overall. Between January and December 2000, there were 260 hospitalizations of active duty soldiers for conditions considered reportable (based on ICD-9-CM coded discharge diagnoses recorded). Of these, 145 were reported through the Army's Reportable Medical Events System (RMES). The completeness of reporting in 2000 was slightly lower than in 1999 suggesting a leveling off of the increasing trend since 1996 (figure 1).

Completeness of reporting hospitalizations, by diagnosis. The largest numbers of reportable hospitalizations were for heat injuries (n=72), varicella (n=36), malaria (n=23), and pneumococcal pneumonia (n=20). Completeness of reporting of these diagnoses were 61%, 60%, 85%, and 5% respectively (table 1).

Completeness of reporting hospitalizations, by site. As in previous years, there was significant variation in reporting completeness among sites. For example, 13 sites out of 33 reported more than half of their notifiable hospitalized cases, while two sites reported none. Fort Carson and Tripler reported 100% of their cases, and had the highest completeness rates.

Timeliness of reporting of hospitalized cases. Of hospitalized cases reported during 2000, 50% were reported within one week of hospital discharge, while approximately 80% were reported within one month (figure 2).

In general, timeliness of reporting has gradually worsened since 1995. However, reported cases during 2000 represent an increase of nearly 10% of cases reported within one week and nearly 6% of cases reported within two weeks. This moderate improvement may indicate a reversal of the trend of less timely reporting of hospitalized notifiable cases.

Editorial comment. For the past four years, the Army Medical Surveillance Activity has periodically compared reported cases of notifiable conditions with counterpart diagnoses reported through standard inpatient data records. Estimates of completeness by this method may underestimate actual reporting completeness since some ICD-9-CM codes are not specific for the reportable conditions alone (i.e., they include clinical states that are not reportable), and diagnoses made in hospital settings may not be based on the same criteria as those required for confirmed reportable cases. Nonetheless, the results of this analysis indicate that the completeness of notifiable disease reporting Army wide may have leveled off after several years of improvement.

Report by Barbara Brynan, MPH, Analysis Group, Army Medical Surveillance Activity.

References

1. Memorandum, HQ, US Army Medical Command, June 17, 1998. Subject: Tri-service reportable events lists.

2. Memorandum, Office of the Assistant Secretary of Defense (Health Affairs), November 6, 1998. Subject: Tri-service reportable events document.

Table 1. Completeness of reporting of hospitalized cases through the Reportable Medical Events System by disease, US Army, 1998-2000

	1998			1999			2000		
	Reports	Cases	%	Reports	Cases	%	Reports	Cases	%
Amebiasis	0	1	0	0	1	0	-	-	-
Anthrax	-	-	-	-	-	-	-	-	-
Botulism	-	-	-	-	-	-	-	-	-
Brucellosis	-	-	-	-	-	-	-	-	-
Campylobacter infection	-	-	-	1	1	100	1	1	100
Carbon monoxide poisoning	4	11	36	-	-	-	-	-	-
Chlamydia trachomatis, genital	-	-	-	-	-	-	-	-	-
Cholera	-	-	-	-	-	-	-	-	-
Coccidioidomycosis	-	-	-	1	3	33	1	3	33
Cold weather injury	6	6	100	1	2	50	2	4	50
Dengue fever	1	1	100	1	1	100	-	-	-
Diphtheria	-	-	-	-	-	-	-	-	-
Encephalitis	-	-	-	-	-	-	-	-	-
Filariasis	-	-	-	-	-	-	1	1	100
Giardiasis	-	-	-	-	-	-	-	-	-
Gonorrhea	5	6	83	0	2	0	1	7	14
Haemophilus influenzae	-	-	-	-	-	-	-	-	-
Hantavirus	-	-	-	-	-	-	-	-	-
Heat	89	137	65	92	126	73	72	118	61
Hemorrhagic fever	-	-	-	1	2	50	-	-	-
Hepatitis A	2	3	67	0	3	0	0	2	0
Hepatitis B	2	4	50	3	7	43	0	2	0
Hepatitis C	-	2	-	0	1	0	0	1	0
Influenza	1	23	4	1	11	9	0	7	0
Lead poisoning	-	-	-	-	-	-	-	-	-
Leishmaniasis	1	2	50	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-	-	-
Leptospirosis	-	-	-	-	-	-	-	-	-
Listeriosis	-	-	-	-	-	-	0	1	0
Lyme disease	1	1	100	0	1	0	0	1	0
Malaria	25	29	86	29	40	73	23	27	85
Measles	0	1	0	-	-	-	-	-	-
Meningococcal disease	0	3	0	2	4	50	2	4	50
Mumps	-	-	-	-	-	-	-	-	-
Pertussis	-	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-
Pneumococcal pneumonia	0	16	0	4	14	29	1	20	5
Poliomyelitis	-	-	-	-	-	-	-	-	-
Q fever	-	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-	-
Relapsing fever	-	-	-	-	-	-	-	-	-
Rheumatic fever, acute	0	1	0	-	-	-	-	-	-
Rift Valley fever	-	-	-	-	-	-	-	-	-
Rocky Mountain spotted fever	0	1	0	-	-	-	2	2	100
Rubella	-	-	-	-	-	-	-	-	-
Salmonellosis	3	12	25	2	8	25	2	2	100
Schistosomiasis	-	-	-	-	-	-	-	-	-
Shigellosis	0	1	0	-	-	-	-	-	-
Smallpox	-	-	-	-	-	-	-	-	-
Strep, grp A, invasive	-	-	-	-	-	-	-	-	-
Syphilis	1	1	100	-	-	-	-	-	-
Tetanus	1	1	100	-	-	-	-	-	-
Trichinosis	-	-	-	-	-	-	-	-	-
Trypanosomiasis	-	-	-	-	-	-	-	-	-
Tuberculosis, pulmonary	2	7	29	1	5	20	2	4	50
Tularemia	-	-	-	-	-	-	-	-	-
Typhoid Fever	-	-	-	-	-	-	-	-	-
Typhus	-	-	-	-	-	-	-	-	-
Urethritis, non-gonococcal	-	-	-	0	1	0	-	-	-
Vaccine, adverse event	0	1	0	-	-	-	-	-	-
Varicella	49	100	49	30	63	48	33	53	62
Yellow Fever	-	-	-	-	-	-	-	-	-

Figure 1. Completeness of reporting of hospitalized cases through the Reportable Medical Events System, US Army, 1995-2000.

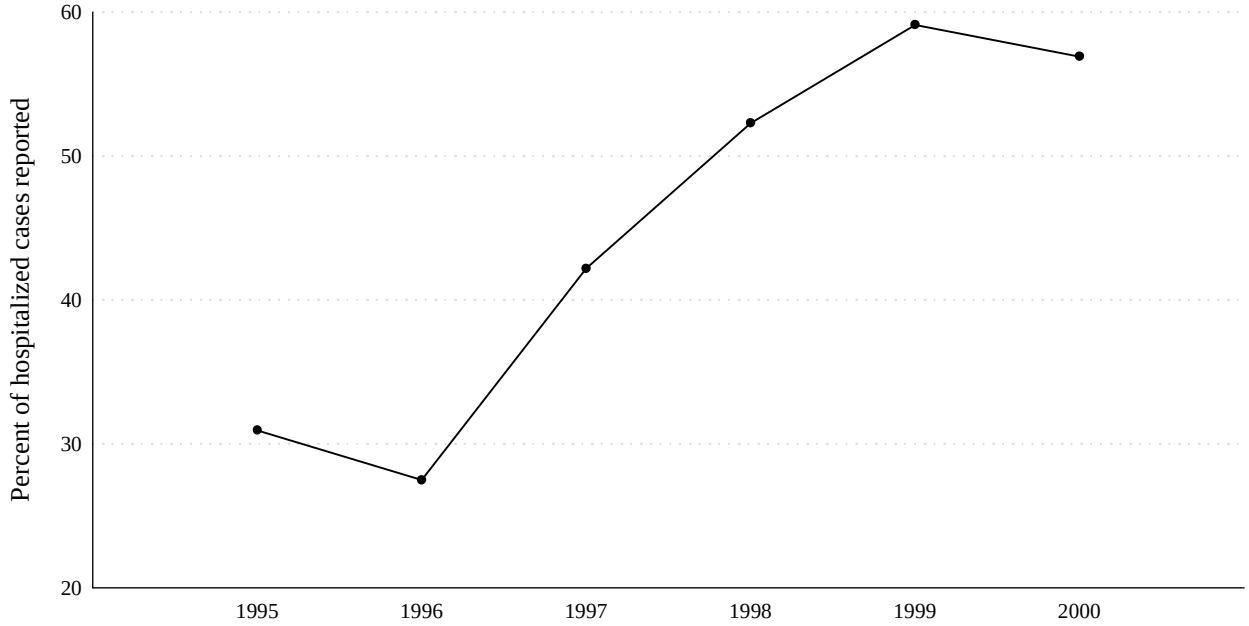


Figure 2. Timeliness of reporting of hospitalized cases through the Reportable Medical Events System, US Army, 1995-2000.

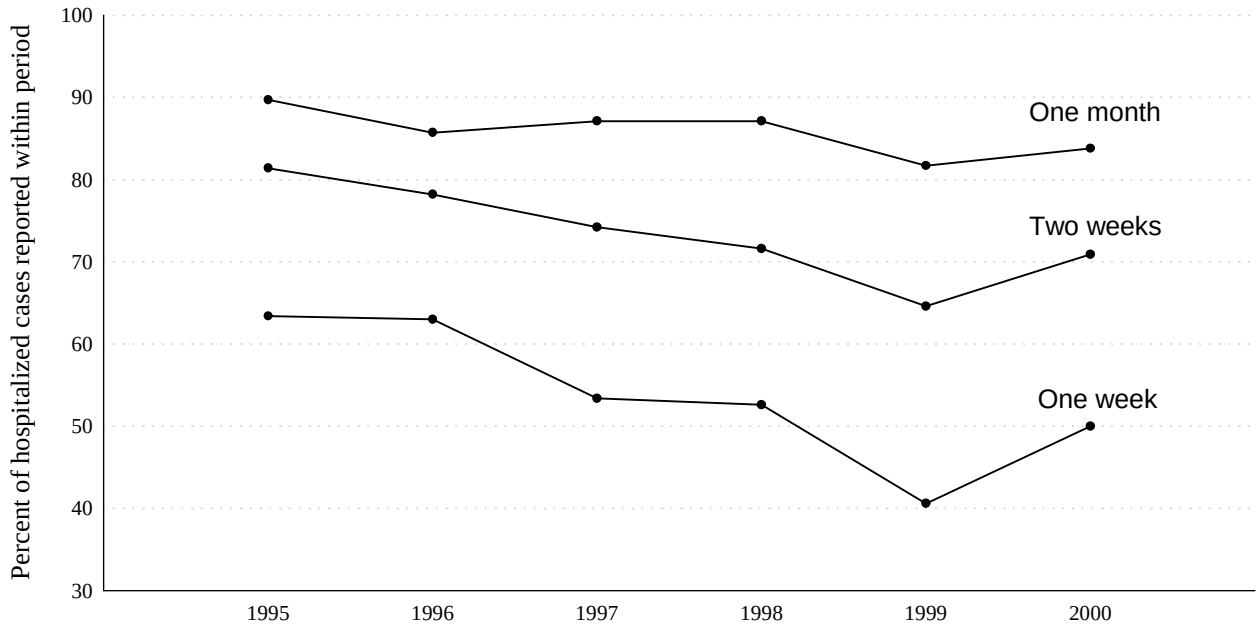


Table 2. Completeness of reporting of hospitalized cases through the Reportable Medical Events System by location of medical treatment facility, US Army, 1998-2000

	1998			1999			2000		
	Reports	Cases	%	Reports	Cases	%	Reports	Cases	%
Ft Belvoir, VA	0	1	0	-	-	-	-	-	-
Ft Benning, GA	29	54	54	48	65	74	27	51	53
Ft Bliss, TX	6	9	67	6	7	86	3	4	75
Ft Bragg, NC	22	32	69	22	30	73	35	40	88
Ft Campbell, KY	2	10	20	7	14	50	6	12	50
Ft Carson, CO	8	12	67	3	5	60	1	1	100
Ft Drum, NY	-	-	-	-	-	-	-	-	-
Ft Eustis, VA	1	3	33	4	4	100	0	1	0
Ft Gordon, GA	2	17	12	3	11	27	2	3	67
Ft Hood, TX	9	14	64	7	11	64	10	16	63
Ft Huachuca, AZ	-	-	-	-	-	-	-	-	-
Ft Irwin, CA	0	6	0	0	4	0	2	3	67
Ft Jackson, SC	8	19	42	5	7	71	2	16	13
Ft Knox, KY	19	21	90	2	6	33	4	9	44
Ft Leavenworth, KS	-	-	-	-	-	-	-	-	-
Ft Lee, VA	-	-	-	-	-	-	-	-	-
Ft Leonard Wood, MO	7	8	88	5	8	63	7	9	78
Ft Lewis, WA	2	4	50	2	9	22	3	8	38
Ft Meade, MD	-	-	-	-	-	-	-	-	-
Ft Polk, LA	9	21	43	1	7	14	4	8	50
Ft Riley, KS	2	4	50	1	5	20	2	5	40
Ft Rucker, AL	-	-	-	2	2	100	2	5	40
Ft Sam Houston, TX	2	5	40	3	8	38	2	11	18
Ft Sill, OK	2	14	14	6	6	100	2	3	67
Ft Stewart, GA	22	28	79	7	12	58	6	9	67
Ft Wainwright, AK	1	4	25	2	4	50	1	4	25
Korea	16	26	62	19	28	68	10	15	67
Tripler, HI	5	5	100	5	5	100	1	1	100
Walter Reed, DC	7	12	58	5	13	38	2	5	40
West Point, NY	-	-	-	-	-	-	-	-	-
Wuerzburg, Germany	6	32	19	2	18	11	7	13	54
Heidelberg, Germany	3	5	60	1	5	20	0	2	0
Landstuhl, Germany	3	5	60	1	2	50	2	6	33

Acute Side Effects of Anthrax Vaccine in ROTC Cadets Participating In Advanced Camp, Fort Lewis, 2000

Anthrax vaccine is currently used by the Department of Defense to protect military personnel serving in "high threat areas" against potential uses of *Bacillus anthracis* as a biowarfare agent. Reports of the safety of the vaccine have been reviewed recently[1,2]. Noted short-term effects include erythema, transient subcutaneous nodules at injection sites, edema, and systemic reactions. An early study by Brachman[3] indicated that about 35% of individuals develop local reactions, most minor in nature, while less than 1% develop systemic symptoms. In the summer of 2000, higher doses than indicated of anthrax vaccine were accidentally administered to cadets participating in ROTC advanced camp at Fort Lewis, Washington. The nature, rates and severity of short-term side effects in relation to vaccine doses were assessed. This report summarizes the findings.

In total, 73 cadets with orders for follow-on training in Korea were scheduled to begin the anthrax vaccine series during Advanced Camp 2000 at Fort Lewis, Washington. On 16 June 2000, 25 cadets received 1.0 milliliter (ml) of the vaccine as their first doses, twice the amount (0.5 ml) recommended by the Food and Drug Administration. The accidental "doubled" doses were given when medical personnel administering the vaccine misunderstood instructions provided by a physician who explained how some residual vaccine remains in the needle hub after, for example, administering 1.0 ml of a vaccine. The medical personnel, who had substantial previous experience in giving anthrax vaccine in 0.5 ml doses, interpreted this guidance to mean that they were to give 1.0 ml of the vaccine. After 25 doubled doses had been administered, clinic personnel realized that they did not have enough vaccine to immunize all cadets who were scheduled. The problem was immediately identified, and actions were implemented to assure correct subsequent dosing.

Methods. All affected cadets were advised of the dosing error and met with a health care provider. All other cadets (n=48) received standard first doses. All of the cadets subsequently received 0.5 ml for their second doses. To assess side effects, a voluntary survey was administered to immunized cadets within a few days after each of the first two doses. The survey after the second dose was modified slightly from the first to assess potential issues identified on the first survey.

Results. Participants in the survey after the first dose included all 25 who received doubled doses and 12 (of 48) who received standard doses. After the first dose, most cadets reported sore arms (figure). Other side effects, specifically swelling and the development of a lump at the injection site, were more common among those who received doubled doses (figure). Twenty-eight percent of the cadets who received doubled first doses (compared to 8% of those who received standard doses) reported that the vaccine had affected their performance in training. There were no additional sick call visits by cadets who received doubled doses, and only one cadet subsequently attended sick call (for a reason unrelated to the vaccine). There were no reactions reported that required hospitalizations or emergency room visits.

In total, 60 cadets completed surveys after their second doses, including 18 (of 25) who received doubled first doses, and 42 (of 48) who received standard first doses. Of nine specific symptoms queried, similar proportions of standard- and double-dose cadets reported one or more symptoms; however, 44% of double-dose cadets (compared to 26% of standard dose cadets) reported 3 or more symptoms. The most common symptom was sore arm, reported by 67% of cadets regardless of the first dose received. The three other most common symptoms (redness, lump at injection site, and swelling) were all more common in the double-dose group (figure). The most common residual symptom from the first shot was lump at the injection site: it was reported by 21% of standard-dose cadets and 67% of double-dose cadets.

Seventeen percent of the double-dose cadets reported decreased performance as a result of the second anthrax vaccine dose (compared to 7% of those that received the standard dose). One cadet who received a doubled first dose attended sick call with a chief complaint of feeling feverish and was returned to duty. There were no hospitalizations, emergency room visits, or missed training related to the vaccine.

In summary, cadets who received doubled first doses of anthrax vaccine had higher rates of several self-reported reactions. All reactions to the vaccine were mild and self-limiting, and none affected cadet training.

Editorial comment. Cadets who received doubled first doses in the anthrax vaccine series had increased rates of some self-reported local symptoms as well as higher rates of limited performance (subjective) during training. The side effects did not result in any clinic visits or lost duty-time. While rates of local reactions were lower after the second dose in both groups, the cadets who received the doubled first doses had modestly higher rates than those who received the standard first doses. The relative excess of mild symptoms following the second (standard) doses of vaccine has several possible explanations. First, some of the reported symptoms persisted from the first dose and may have been unrelated to the second dose. Second, prior medical reports indicate that higher rates of side effects may occur with successive doses of vaccine. Cadets receiving a higher antigen load on the first dose may, therefore, experience higher rates of side effects in later doses. Nonetheless, given that the primary series consists of six shots, the health effect of the additional antigenic load in a doubled first dose is considered insignificant.

Cadets who received increased first doses were informed of the over-administration prior to receiving the survey. Because of their awareness of the increased dose, it is possible that they were more vigilant in self-monitoring for vaccine side effects than the cadets who received the standard dose. This is a well known bias in retrospective medical investigations (a type of information bias known as the "Hawthorne effect"). A weakness of the reported study is that, because of logistical constraints of the training regimen, no population-based clinical evaluations were conducted of cadets receiving the vaccine. All results were self-reported and, therefore, subjective.

Data analysis and report by COL Jeffrey D. Gunzenhauser, MC, LTC James E. Cook, MC, and CPT Michael E. Parker, MC, USA, all of the Preventive Medicine Service, Madigan Army Medical Center. Survey design by Ms. Ilona Wright, Western Regional Medical Command Anthrax Program Manager. Initial counseling of cadets by LTC James D. Wells, MC.

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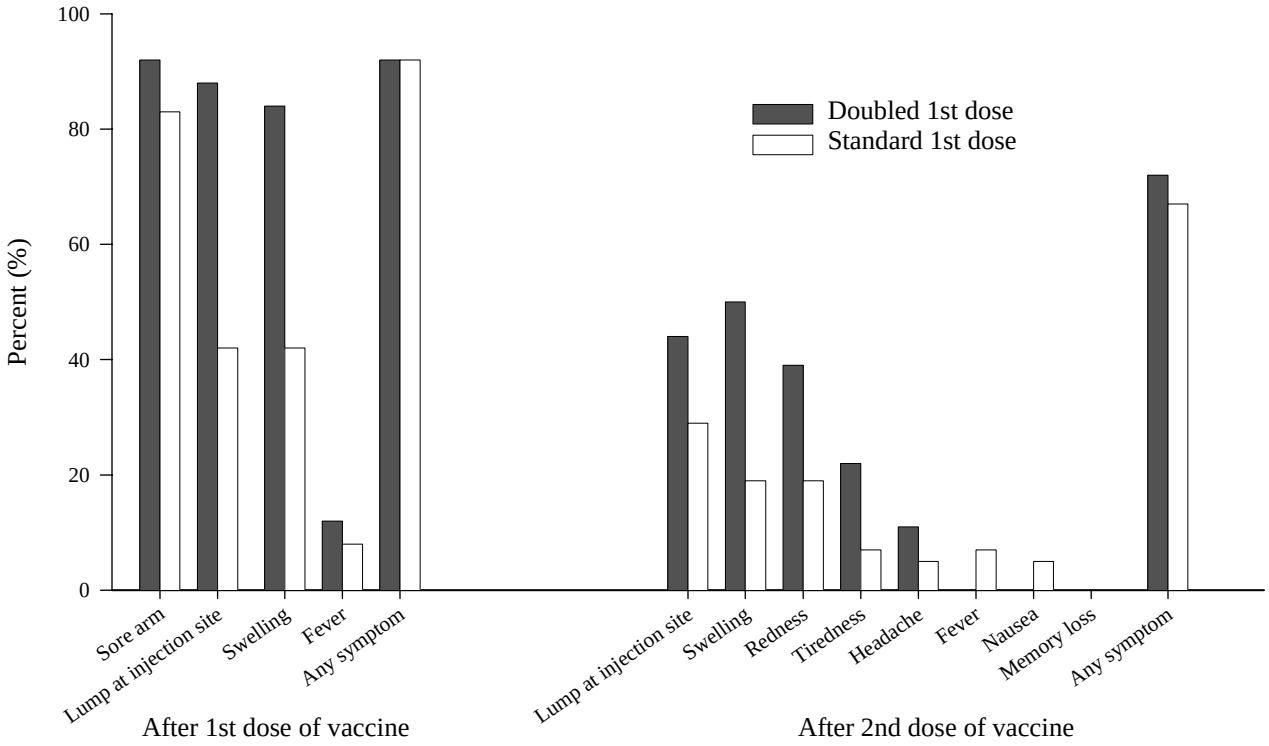
3. Brachman PS, Gold H, Plotkin SA, Fekety FR, Werrin M, Ingraham NR. Field evaluation of a human anthrax vaccine. Am J Public Health 1962;52:632-645.

Table 1. Numbers and percentages of ROTC cadets who self-reported symptoms after 1st and 2nd doses of Anthrax Vaccine Adsorbed (AVA), by initial vaccine dose, Fort Lewis, Washington, June 2000.

	Symptoms reported after 1st dose				*Symptoms reported after 2nd dose*			
	Dbl* Dose: 1.0 ml Respondents (n=25)		Std* Dose: 0.5 ml Respondents (n=12)		Dbl* Dose group Respondents (n=18)		Std* Dose group Respondents (n=42)	
Symptoms	Count	%	Count	%	Count	%	Count	%
Sore arm	23	92%	10	83%	12	67%	28	67%
Lump at injection site	22	88%	5	42%	8	44%	12	29%
Swelling	21	84%	5	42%	9	50%	8	19%
Fever	3	12%	1	8%	0	0%	3	7%
Redness	0	0%	0	0%	7	39%	8	19%
Tiredness	0	0%	0	0%	4	22%	3	7%
Headache	0	0%	0	0%	2	11%	2	5%
Nausea	0	0%	0	0%	0	0%	2	5%
Memory loss	0	0%	0	0%	0	0%	0	0%
Any symptom	23	92%	11	92%	13	72%	28	67%

*Dbl=Double; Std=Standard

Figure 1. Self-reported symptoms after 1st and 2nd doses of Anthrax Vaccine Absorbed (AVA) among ROTC cadets who received doubled (1.0ml) and standard (0.5ml) initial vaccine doses, Fort Lewis, Washington, June 2000.



Sentinel reportable events, US Army medical treatment facilities cumulative events for all beneficiaries,[1] calendar year through May 31, 2000 and 2001[2]

Reporting location	Number of reports all events[3]		Food-borne								Vaccine Preventable					
			Campylobacter		Giardia		Salmonella		Shigella		Hepatitis A		Hepatitis B		Varicella	
	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000
NORTH ATLANTIC																
Washington DC Area	68	57	-	-	4	2	4	1	-	2	1	-	1	-	2	1
Aberdeen, MD	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Belvoir, VA	66	49	4	2	1	2	1	3	-	-	-	1	2	-	-	-
FT Bragg, NC	378	432	-	1	-	-	1	4	-	1	-	-	-	-	1	2
FT Drum, NY	73	79	-	1	-	-	-	-	-	-	-	-	-	-	3	-
FT Eustis, VA	70	90	1	-	-	-	-	1	-	-	-	-	1	-	-	1
FT Knox, KY	82	106	-	-	-	3	-	-	-	-	-	-	1	-	4	1
FT Lee, VA	100	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Meade, MD	31	24	-	-	-	-	1	1	-	-	-	-	-	-	-	-
West Point, NY	12	8	-	-	-	-	-	-	-	-	-	2	-	-	-	-
GREAT PLAINS																
FT Sam Houston, TX	107	92	-	-	-	2	-	-	-	-	2	-	-	-	1	-
FT Bliss, TX	117	90	-	3	1	1	3	-	3	3	-	-	-	-	2	1
FT Carson, CO	227	264	-	1	-	-	-	1	1	1	-	-	-	1	-	-
FT Hood, TX	491	379	1	1	-	-	-	1	2	-	-	-	-	-	2	1
FT Huachuca, AZ	22	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Leavenworth, KS	6	11	-	1	-	-	1	1	-	-	-	-	-	-	-	-
FT Leonard Wood, MO	40	79	-	-	-	-	-	-	-	-	-	-	-	-	8	5
FT Polk, LA	71	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Riley, KS	94	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Sill, OK	95	112	-	-	-	-	-	-	-	-	-	-	-	-	2	1
SOUTHEAST																
FT Gordon, GA	72	77	-	-	-	-	-	-	-	-	-	-	-	1	1	-
FT Benning, GA	96	203	-	-	1	-	1	2	-	1	-	-	-	-	5	3
FT Campbell, KY	116	253	-	3	2	2	-	2	-	-	-	-	-	-	1	-
FT Jackson, SC	202	79	-	-	-	-	-	-	-	-	-	-	-	3	3	2
FT Rucker, AL	28	28	-	-	-	-	1	2	-	-	-	-	-	-	-	-
FT Stewart, GA	168	182	-	-	-	-	-	2	-	-	-	-	-	3	-	-
WESTERN																
FT Lewis, WA	174	262	-	1	1	1	-	3	-	-	-	-	1	2	-	-
FT Irwin, CA	10	20	-	-	-	-	-	-	-	-	-	-	-	1	-	1
FT Wainwright, AK	26	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTHER LOCATIONS																
Hawaii	255	305	7	11	6	8	1	6	-	3	1	-	1	1	1	-
Europe	402	436	2	7	1	1	5	9	-	-	-	-	3	4	6	6
Korea	114	6	-	-	-	-	1	1	-	-	-	-	1	-	1	-
Total	**3813**	**4002**	**15**	**32**	**17**	**22**	**20**	**40**	**6**	**11**	**4**	**3**	**11**	**16**	**43**	**25**

1. Includes active duty servicemembers, dependents, and retirees.

2. Events reported by June 7, 2000 and 2001.

3. Seventy events specified by Tri-Service Reportable Events, Version 1.0, July 2000.

Note: Completeness and timeliness of reporting vary by facility.

Source: Army Reportable Medical Events System.

(Cont'd) Sentinel reportable events, US Army medical treatment facilities cumulative events for all beneficiaries,[1] calendar year through May 31, 2000 and 2001[2]

Reporting location	Arthropod-borne				Sexually Transmitted								Environmental			
	Lyme Disease		Malaria		Chlamydia		Gonorrhea		Syphilis[3]		Urethritis[4]		Cold		Heat	
	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000
NORTH ATLANTIC																
Washington DC Area	2	-	-	-	14	22	11	5	1	3	-	-	-	-	-	-
Aberdeen, MD	-	-	-	-	-	12	-	6	-	-	-	-	-	-	-	-
FT Belvoir, VA	-	-	-	-	47	31	6	7	2	1	-	-	-	-	-	-
FT Bragg, NC	-	-	1	2	161	209	88	104	1	-	123	83	-	7	2	17
FT Drum, NY	-	-	-	-	42	60	18	17	-	-	-	-	9	-	-	-
FT Eustis, VA	1	-	-	-	53	66	11	21	-	-	-	-	-	-	-	-
FT Knox, KY	-	-	-	-	58	78	17	21	1	2	-	-	-	-	-	-
FT Lee, VA	-	-	-	-	78	69	22	22	-	-	-	-	-	-	-	-
FT Meade, MD	-	-	-	-	22	18	4	5	-	-	1	-	-	-	-	-
West Point, NY	-	1	-	-	10	5	1	-	-	-	-	-	1	-	-	-
GREAT PLAINS																
FT Sam Houston, TX	-	-	-	-	86	75	12	9	-	-	2	-	-	1	-	1
FT Bliss, TX	-	-	1	1	53	44	17	21	2	1	-	-	-	-	-	1
FT Carson, CO	-	-	-	-	187	204	28	24	-	-	10	29	-	-	-	-
FT Hood, TX	-	-	-	-	272	191	98	80	-	3	95	91	1	-	-	-
FT Huachuca, AZ	-	-	-	-	16	8	6	-	-	-	-	-	-	-	-	-
FT Leavenworth, KS	-	-	-	-	3	5	-	2	-	-	-	-	-	-	-	-
FT Leonard Wood, MO	-	-	-	-	18	48	8	17	-	-	3	2	3	3	-	-
FT Polk, LA	-	-	-	-	64	73	7	18	-	-	-	-	-	-	-	-
FT Riley, KS	-	-	-	-	50	32	22	5	-	-	-	-	22	-	-	-
FT Sill, OK	-	-	-	-	65	60	12	21	-	-	12	26	-	-	-	-
SOUTHEAST																
FT Gordon, GA	-	-	-	1	68	67	2	6	-	-	-	-	-	-	-	-
FT Benning, GA	-	-	-	-	50	119	29	36	3	-	-	1	-	-	4	8
FT Campbell, KY	-	-	-	-	61	205	49	39	1	1	-	-	2	-	-	-
FT Jackson, SC	-	-	-	-	176	46	23	25	-	1	-	-	-	-	-	-
FT Rucker, AL	-	-	-	-	19	19	8	4	-	-	-	-	-	-	-	1
FT Stewart, GA	-	-	-	-	69	55	39	47	-	-	60	72	-	-	-	2
WESTERN																
FT Lewis, WA	-	-	1	-	98	165	16	33	-	-	49	50	-	4	-	-
FT Irwin, CA	-	-	-	-	10	12	-	2	-	-	-	-	-	-	-	2
FT Wainwright, AK	-	-	-	-	22	20	1	-	-	-	-	-	3	10	-	-
OTHER LOCATIONS																
Hawaii	-	-	-	-	170	207	28	26	-	-	-	1	-	-	1	-
Europe	-	1	-	-	312	343	61	53	1	1	-	-	5	6	-	-
Korea	-	-	-	-	95	1	3	3	6	1	-	-	2	-	-	-
Total	**3**	**2**	**3**	**4**	**2449**	**2569**	**647**	**679**	**18**	**14**	**355**	**355**	**48**	**31**	**7**	**32**

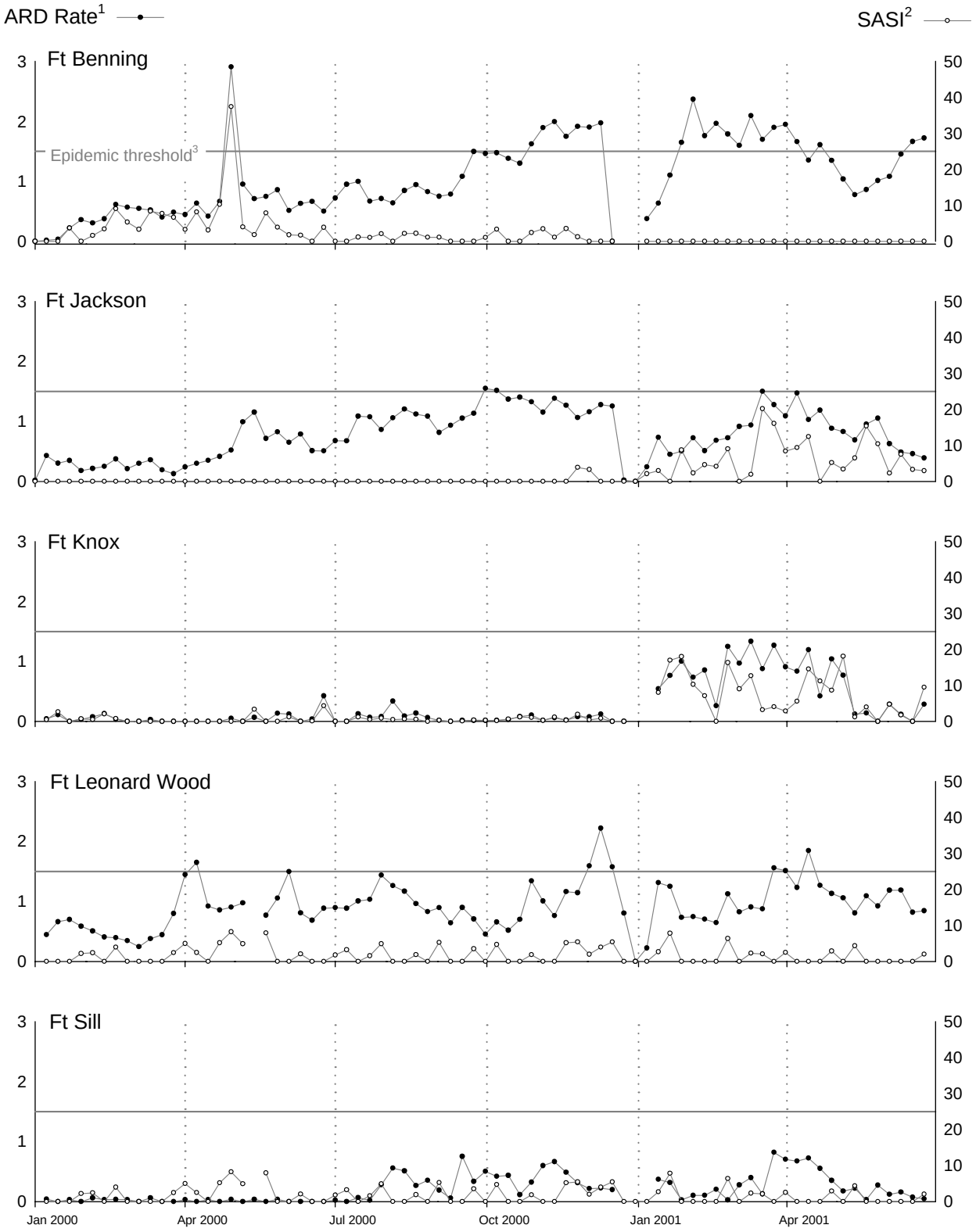
3. Primary and secondary.

4. Urethritis, non-gonoccal (NGU).

Note: Completeness and timeliness of reporting vary by facility.

Source: Army Reportable Medical Events System.

Acute respiratory disease (ARD) and streptococcal pharyngitis (SASI), Army Basic Training Centers by week through June 2001



[1]ARD rate = cases per 100 trainees per week

[2]SASI (Strep ARD surveillance index) = (ARD rate)(rate of Group A beta-hemolytic strep)

[3]ARD rate >=1.5 or SASI >=25.0 for 2 weeks defines epidemic

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